CLAIMS

What is claimed is:

1. A contact lens having one or more optimized optical zones that accommodate the specific optical variations of the eye of the wearer, the one or more optical zones being placed within the contact lens in relation to the true line of sight of the wearer.

2. The contact lens of claim 1, wherein the contact lens includes mechanical features such that the one or more optical zones are positionally maintained in the eye while worn by the wearer.

3. The contact lens of claim 1, wherein the placement of the one or more optical zones is determined from measurement data derived from wavefront data and corneal topography of the eye of the contact lens wearer for primary gaze.

4. The contact lens of claim 1, wherein the placement of the one or more optical zones is determined from measurement data derived from the position of a test lens relative to the center of the cornea using an eye tracking system with the eye fixated in primary gaze.

5. The contact lens of claim 1, wherein the placement of one or more optical zones of the contact lens is adjusted based upon use in the eye of the wearer.

6. The contact lens of claim 1, wherein the one or more optical zones of the contact lens are created with a multi-axis cutting system.

7. A method for manufacturing a contact lens having one or more optimized optical zones that can accommodate the specific optical variations of the eye of the wearer, comprising the steps of:

obtaining information about the true line of sight of the eye, wherein the true line of sight of the eye is determined by measuring the variations in the eye of a potential contact lens wearer;

determining one or more optimal optical zones for a contact lens used in the eye of the potential wearer such that the optical zone is placed substantially on the true line of sight; and

manufacturing the contact lens to contain the one or more optimal optical zones.

8. The method of claim 7, wherein the step of manufacturing the contact lens occurs with a multi-axis cutting system.

9. The method of claim 7, wherein the step of manufacturing the contact lens includes the step of creating mechanical features on the contact lens such that the one or more optimal optical zones are positionally maintained in the eye while worn by the wearer.

10. The method of claim 7, wherein the step of obtaining information about the true line of sight of the eye is obtaining measurement data derived from wavefront data and corneal topography of the eye of the contact lens wearer for primary gaze.

11. The method of claim 7, wherein the step of obtaining information about the true line of sight of the eye is obtaining measurement data derived from the position of a test lens relative to the center of the cornea using an eye tracking system with the eye fixated in primary gaze.

12. The method of claim 7, wherein the steps of the method are iterated to optimize the location of the one or more optical zones.

13. A method for manufacturing a contact lens having one or more optimized optical zones that can accommodate the specific optical variations of the eye of the wearer, comprising the steps of:

a step for obtaining information about the true line of sight of the eye, wherein the true line of sight of the eye is determined by measuring the variation in the eye of a potential contact lens wearer to determine the line of sight of the eye;

a step for determining one or more optimal optical zones for a contact lens used in the eye of the potential wearer such that the optical zone is placed in relation to the true line of sight of the eye of the wearer; and

a step for manufacturing the contact lens to contain the one or more optimized optical zones.

14. The method of claim 13, further comprising a step for iterating the optimization of the one or more optical zones.